

What is claimed is:

1. An optical defect inspection system for identifying and locating defects in a workpiece, comprising:

an optical measurement device adapted to view the workpiece along an optical path; and

5 an optical indicia device located in the optical path, adapted to provide location information with respect to a defect in the workpiece.

2. The system of claim 1, wherein the optical measurement device comprises an optical microscope.

3. The system of claim 1, wherein the optical indicia device comprises a transparent member having non-transparent optical indicia defining a plurality of transparent regions in the optical indicia device along the optical path.

4. The system of claim 3, wherein the non-transparent optical indicia includes a plurality of lines arranged in a pattern, and wherein the plurality of transparent regions have a shape associated therewith.

5. The system of claim 4, wherein the shape includes one of a rectangular shape and a hexagonal shape.

6. The system of claim 1, wherein the optical indicia device is movable between a first position wherein the optical indicia device is located generally in the optical path, and a second position wherein the optical indicia device is located generally outside the optical path.

7. The system of claim 1, wherein the optical indicia device comprises a generally planar transparent member having non-transparent optical indicia defining a plurality of transparent regions in the optical indicia device along the optical path and

wherein the optical indicia device is mounted in a first plane generally perpendicular to the optical path.

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8. The system of claim 7, wherein the transparent member is movable between a first position in the first plane, and a second position in a second plane, and wherein the second plane is parallel with the first plane.

9. The system of claim 8, wherein the first and second planes are generally horizontal and wherein the optical path is generally vertical.

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10. The system of claim 8, wherein the transparent member is generally laterally movable with respect to the optical path.

11. The system of claim 8, wherein the optical indicia device is movable between a first position wherein at least a portion of the optical indicia device is located in the optical path, and a second position wherein the optical indicia device is located outside the optical path.

~~12. The system of claim 7, wherein the transparent member is laterally movable with respect to the optical path.~~

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13. The system of claim 7, wherein the optical indicia device is movable between a first position wherein the optical indicia device is located in the optical path, and a second position wherein the optical indicia device is located outside the optical path.

14. The system of claim 1, further comprising a base, wherein the workpiece is removably mounted on the base in a first plane generally perpendicular to the optical path, wherein the optical measurement device is movable in a second plane generally parallel to the first plane, wherein the optical indicia device is generally parallel with the first plane

5 and located in the optical path, and wherein the location information includes the relative position of the optical measurement device with respect to the workpiece.

15. The system of claim 14, wherein the optical indicia device is movable between a first position in a third plane, and a second position in a fourth plane, and wherein the fourth plane is generally parallel with the first plane.

16. The system of claim 15, wherein the first, second, third and fourth planes are generally horizontal and wherein the optical path is generally vertical.

17. In an optical defect inspection system having an optical measurement device adapted to view a workpiece along an optical path and an optical indicia device located in the optical path between the workpiece and the optical measurement device, a method of identifying and locating defects in the workpiece, comprising:

identifying a first defect in a first workpiece using the optical measurement device;

determining a location of the first defect using the optical indicia device;

10 inspecting at least a portion of a second workpiece using the optical measurement device and the optical indicia device according to the location of the first defect in the first workpiece;

determining whether a second defect exists in the inspected portion of the second workpiece using the optical measurement device; and

15 correlating the first and second defects according to the location of the first defect in the first workpiece, if a second defect exists in the inspected portion of the second workpiece.

18. The method of claim 17, wherein determining the location of the first defect using the optical indicia device comprises obtaining location information from the optical indicia device regarding the relative position of the optical measurement device and the first workpiece.

5 19. The method of claim 18, wherein the optical indicia device comprises a transparent member having non-transparent optical indicia defining a plurality of transparent regions in the transparent member, wherein at least one of the transparent regions is located along the optical path, and wherein the optical indicia device is adapted to provide the location information according to the at least one transparent region located along the optical path.

20. The method of claim 19, wherein inspecting the portion of a second workpiece using the optical measurement device and the optical indicia device according to the location of the first defect in the first workpiece comprises locating the optical measurement device with respect to the second workpiece via the optical indicia device to view the second workpiece through the at least one transparent region located along the optical path.

21. The method of claim 17, wherein correlating the first and second defect according to the location of the first defect in the first workpiece comprises determining whether the cause of the second defect is also the cause of the first defect.

5 22. In an optical defect inspection system having an optical measurement device adapted to view a workpiece along an optical path and an optical indicia device located in the optical path between the workpiece and the optical measurement device, a method of identifying and locating defects in the workpiece, comprising:

identifying a blank workpiece defect in a blank workpiece using the optical measurement device;

determining a location of the blank workpiece defect using the optical indicia device;

10 identifying a patterned workpiece defect in a patterned workpiece using the optical measurement device;

determining a location of the patterned workpiece defect using the optical indicia device; and

correlating the locations of the blank workpiece defect and the patterned workpiece defect in order to determine a cause of the patterned workpiece defect.

23. An optical indicia device for use in an optical defect inspection system, comprising:

a planar transparent member having non-transparent optical indicia defining a plurality of transparent regions in the transparent member along an axis generally perpendicular to a plane of the transparent member;

wherein the plurality of transparent regions have a shape associated therewith; and wherein the shape of the transparent regions is one of a rectangular shape and a hexagonal shape.

24. In an optical defect inspection system having an optical measurement device adapted to view a workpiece along an optical path and an optical indicia device located in the optical path between the workpiece and the optical measurement device and having a transparent member with non-transparent optical indicia defining a plurality of transparent regions in the optical indicia device along the optical path, a method of identifying a defect in a blank workpiece, comprising:

viewing images of two portions of the workpiece through two of the transparent regions using the optical measurement device;

comparing the images of the two portions of the workpiece; and

identifying a defect in the workpiece in one of the two portions of the workpiece if there is a difference in the images of the two portions of the workpiece.

25. An optical defect inspection system for locating defects in a workpiece, comprising:

viewing means for viewing at least a portion of a workpiece along an optical path; and

defect location means for locating a defect in the workpiece;

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wherein the defect location means is selectively movable between a first position in the optical path between the viewing means and the workpiece, and a second position outside the optical path, and wherein the defect location means is adapted to provide location information relating to the relative position of the defect with respect to the workpiece.

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